

REMARKS

With this paper, Applicants have amended claims 1-4, 6-7, 9, 12-14, 17 and 20-24, canceled claims 8 and 11, and added new claims 25 and 26. Claims 1-7, 9-10 and 12-26 are pending. Reconsideration of this application, as amended, is requested.

Priority

This application is continuation application under 37 CFR § 1.53(b) of Serial No. 10/217,375, which is a continuation under 37 CFR § 1.53(b) of Serial No. 09/660,127.

As stated in the Communication filed with the filing of this application, new claims and a summary of those claims were added to the application-as-filed. The claims and the summary of those claims are supported by 10/217,375 and 09/660,127. To facilitate prosecution, however, the text at page 4, line 9 to page 5, line 10 has been canceled.

Oath

The Office Action indicates that the declaration submitted is defective because it refers to application 09/660,127. This application is continuation application under 37 CFR § 1.53(b) of Serial No. 10/217,375, which is a continuation under 37 CFR § 1.53(b) of Serial No. 09/660,127. The declaration for 09/660,127 is proper for this filing. However, submitted herewith is a newly signed declaration for this application, 10/696,442.

112 Rejections

Claims 11, 13, 14, 20, 21 and 24 were rejected under 35 U.S.C. 112, first paragraph and second paragraph. Claims 11, 13, 14, 20, 21, 24 have been amended, changing "absorbent" to "adsorbent". Withdrawal of these rejections is requested.

Double Patenting

Claims 1-5, 7-9, 11-14 and 17-20 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-8, 12, 14, 15, 17 and 21 of U.S. Patent No. 6,638,339.

Claims 1-5, 7-9 and 11-24 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6, 10, 11, 13 and 14 of U.S. Patent 6,432,177.

Applicants contend that this double patenting rejection is premature, with no claims of the pending application having been allowed. Applicants will submit a Terminal Disclaimer, if necessary, when the claims are in final form.

The Claims, Generally

Claims 1-10 and 25, as amended, are directed to a fuel cell system that includes a fuel cell and a filter assembly having a filter element with a first adsorbent materials and a second adsorbent material and a particulate filter positioned downstream of the adsorbent materials.

Claims 12-16 and 26, as amended, are directed to a filter assembly for use with a fuel cell, the filter assembly includes a first carbon adsorbent material and a second carbon adsorbent material and a particulate filter downstream of the adsorbent materials.

Claims 17-19 are to a fuel cell system that includes a filter element with a first adsorbent material, second adsorbent material and a particulate filter downstream thereof, the filter adapted to clean an oxidant stream below a predetermined threshold limit.

Claims 20-24 are directed to a method that includes passing a dirty gas stream through a specific filter assembly and providing cleaned gas to the gas inlet of a fuel cell.

102 Rejections

Claims 1-3, 7-9, 11, 12, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese reference (JP 60-054177 A). Applicants disagree.

Each of independent claims 1, 12, 17 and 20 has been amended to more precisely define the filtration assembly or filter element recited. In each of these claims, included is a first adsorbent material, a second adsorbent material, and a particulate filter downstream of the adsorbent materials. There is no disclosure in JP 60-054177 of such a configuration for a fuel cell.

JP 60-054177 teaches providing an air cleaning filter 20 having activated carbon sandwiched between electret filters (i.e., particulate filters) at an air inlet 4 for a fuel cell 1.

There is no disclosure of having two different types of carbon or adsorbent materials for the filtration assembly on the fuel cell. At least for this reason, the JP reference does not anticipate the claims, as amended, and withdrawal of the rejection is requested.

Claims 1-3, 7-11 and 17-19 are rejected under 35 U.S.C. 102 (b) as being anticipated by Nakanishi et al. (4,595,642). Applicants disagree.

As provided above, independent claims 1 and 17 have been amended to more precisely define the filtration assembly or filter element recited. Particularly, the assembly includes two different adsorbent materials and a particulate filter downstream of the adsorbent. There is no disclosure in Nakanishi of such a configuration for use with a fuel cell.

Nakanishi teaches having a dust filter 25 upstream of an air compressor which is upstream of columns of absorbent material (zeolites and molecular sieves). There is no disclosure or suggestion that different materials could be in the various columns. At least for these reasons, Nakanishi does not anticipate the claims, as amended, and withdrawal of the rejection is requested.

Claims 12, 13, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kinkead et al. (5,626,820). Applicants disagree.

As provided above, independent claim 12 has been amended to more precisely define the filter assembly recited. Particularly, the assembly has a particulate filter and a chemical filter comprising a first carbon adsorbent material and a second carbon adsorbent material, with the particulate filter positioned downstream of the adsorbent material.

Kinkead et al. teaches having a HEPA filter 24 and gas-phase filter 14, with a blower 18 positioned therebetween, for cleansing air for a clean-room environment. There is no discussion of having two carbon adsorbent materials in the filter assembly. Additionally, there is no teaching that the air is used for a fuel cell. At least for these reasons, Kinkead et al. does not anticipate the claims, as amended, and withdrawal of the rejection is requested.

103 Rejections

Claims 4-6, 14 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP '177 in view of Berger et al. (3,217,715). Claims 21-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP '177 in view of Kinkead et al. '820. Applicants disagree with both of these rejections.

The claims have been amended as described generally above. The teachings, and lackings, of JP 60-054177 have been described. Berger et al. is cited for the teaching of using an extruded activated carbon filter removing contaminants from a gas stream. Kinkead is cited for the teaching of impregnating an activated carbon with an acid or a base. Even when JP 60-054177 is combined with Berger et al. or Kinkead et al., or both, the combination is still lacking the teaching or suggestion of having a filter assembly for a fuel cell that has two different types of carbon or adsorbent materials for use with the air or oxidant intake of a fuel cell.

At least for these reasons, JP 60-054177 combined with Berger et al. or Kinkead et al., or both, does not make obvious the claims, as amended, and withdrawal of the rejections is requested.

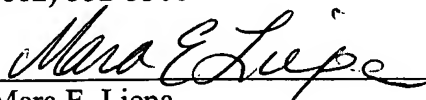
SUMMARY

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

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Mara E. Liepa
Reg. No. 40,066

